

PLOT SCALE - 1:50000

PLOTTED FROM - TRAB17879

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

PROJECT PH 0010(126)
ABERDEEN REGION

HORIZONTAL CURVE DELINEATION

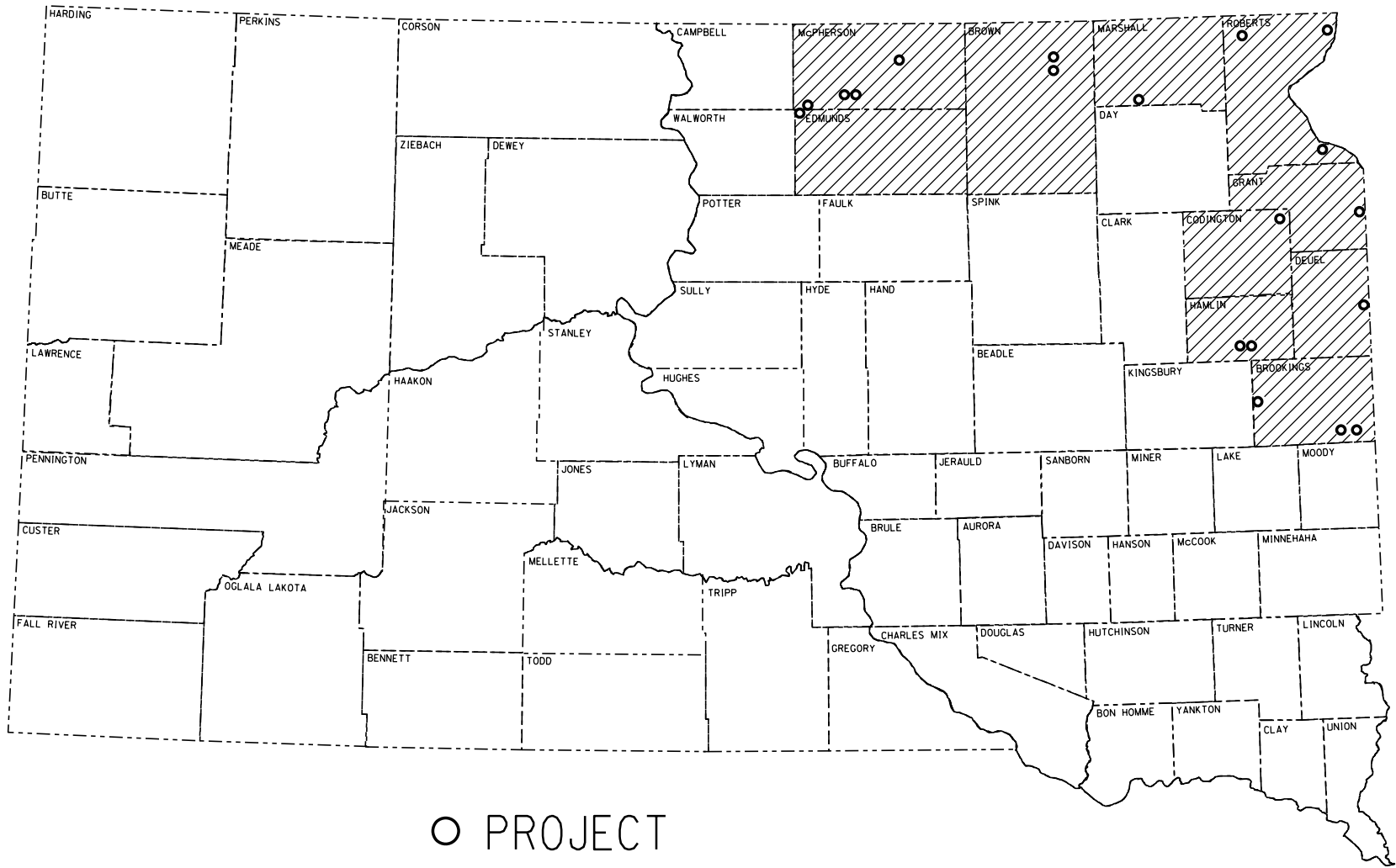
PCN 05FW

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(126)	1	18
Plotting Date: 06/02/2016			

Revised 6/1/2016 DLM

INDEX OF SHEETS

Sheet 1	Title Sheet
Sheet 2	Estimate of Quantities
Sheet 3	EnvirontalCommitments
Sheets 4-9	Permanent Sign Table
Sheet 10	Sign Summary
Sheet 11	Chevron Installation Table
Sheet 12	Plan Notes
Sheet 13	Mobile Operation Detail
Sheets 14-16	Traffic Control Standard Plates
Sheets 17-18	Details



STORM WATER PERMIT
NON REQUIRED

2

FILE - ... \PLANS\05FW_TITLE SHEET.DGN PLOT NAME - 1

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E0130	Remove Traffic Sign	98	Each
632E1320	2.0"x2.0" Perforated Tube Post	3,068.0	Ft
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	356.0	SqFt
632E3525	Install State Furnished Sign	1,782.0	SqFt
634E0010	Flagging	50.0	Hour
634E0110	Traffic Control Signs	159.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0265	Type 3 Barricade, 6' Double Sided	1	Each
634E0420	Type C Advance Warning Arrow Board	1	Each

Revised 6/20/2016 DLM

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

ENVIRONMENTAL COMMITMENTS

ENVIRONMENTAL COMMITMENTS

An Environmental Commitment is a measure that SDDOT commits to implement in order to avoid, minimize, and/or mitigate a real or potential environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency mentioned below with permitting authority can influence a project if perceived environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. The environmental commitments associated with this project are as follows:

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pit, or staging site associated with the project, cease construction activities in the affected area until the Whooping Crane departs and contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor shall furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for Highway, Road, and Railway Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Environment and Natural Resources.

The waste disposal site(s) shall not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements shall apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the Public ROW through the use of fences, gates, and placement of a sign or signs at the entrance to the site stating "No Dumping Allowed".

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall be removed from view of the ROW or buried and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) shall be incidental to the various contract items.

Revised 6/2/2016 DLM

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require review of cultural resources impacts. This work includes, but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor shall arrange and pay for a cultural resource survey and/or records search. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor shall provide ARC with the following: a topographical map or aerial view on which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

If evidence for cultural resources is uncovered during project construction activities, then such activities shall cease and the Project Engineer shall be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

P 0010(126), PCN 05FW Permanent Sign Installation Table

Highway	County	MRM	Side of Road	Description	Sign Code	Width (Inches)	Height (Inches)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SqFt)	2.0"x2.0" Perforated Tube Post 12 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Remarks
SD10	Brown	299.00+0.235	Rt.	Curve Left	W1-2L	30	30	6.3	15	1	1	W	New Sign Installation
				Advisory Speed Plaque 60 MPH	W13-1P	18	18	2.3					
SD10	Brown	299.00+0.690	Lt.	Curve Right	W1-2R	30	30	6.3	15	1	1	N	New Sign Installation
				Advisory Speed Plaque 60 MPH	W13-1P	18	18	2.3					
SD10	Brown	301.00+0.165	Rt.	Curve Right	W1-2R	30	30	6.3	15	1	1	S	New Sign Installation
				Advisory Speed Plaque 60 MPH	W13-1P	18	18	2.3					
SD10	Brown	301.00+0.649	Lt.	Curve Left	W1-2L	30	30	6.3	15	1	1	E	New Sign Installation
				Advisory Speed Plaque 60 MPH	W13-1P	18	18	2.3					
SD13	Brookings	120.00+0..884	Rt.	Curve Right	W1-2R	30	30	6.3	15	1	1	S	New Sign Installation
				Advisory Speed Plaque 55 MPH	W13-1P	18	18	2.3					
SD13	Brookings	120.99+0.390	Lt.	Curve Left	W1-2L	30	30	6.3	15	1	1	E	New Sign Installation
				Advisory Speed Plaque 55 MPH	W13-1P	18	18	2.3					
SD13	Brookings	125+00+0.706	Rt.	Curve Left	W1-2L	30	30	6.3	15	1	1	W	New Sign Installation
				Advisory Speed Plaque 50 MPH	W13-1P	18	18	2.3					
SD13	Brookings	126.06+0.113	Lt.	Curve Right	W1-2R	30	30	6.3	15	1	1	N	New Sign Installation
				Advisory Speed Plaque 50 MPH	W13-1P	18	18	2.3					

P 0010(126), PCN 05FW Permanent Sign Installation Table

Highway	County	MRM	Side of Road	Description	Sign Code	Width (Inches)	Height (Inches)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SqFt)	2.0"x2.0" Perforated Tube Post 12 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Remarks
US14 EB	Brookings	402.00+0.869	Rt.	CurveLeft	W1-2R	30	30	6.3	15	1	1	N	New Sign Installation
US14 WB	Brookings	403.09+0.324	Lt.	Curve Right	W1-2L	30	30	6.3	15	1	1	E	New Sign Installation
SD15	Roberts	187.00+0.312	Rt.	Curve Left	W1-2L	30	30	6.3	15	1	1	S	New Sign Installation
				Advisory Speed Plaque 55 MPH	W13-1P	18	18	2.3					
SD15	Roberts	187.48+0.228	Lt.	Curve Right	W1-2R	30	30	6.3	15	1	1	W	New Sign Installation
				Advisory Speed Plaque 55 MPH	W13-1P	18	18	2.3					
SD20	Codington	423.00+0.570	Rt.	Reverse Curve Right	W1-4R	30	30	6.3	15	1	1	W	New Sign Installation
				Advisory Speed Plaque 55 MPH	W13-1P	18	18	2.3					
SD20	Codington	424.00+.053	Lt.	Reverse Curve Right	W1-4R	30	30	6.3	15	1	1	E	New Sign Installation
				Advisory Speed Plaque 55 MPH	W13-1P	18	18	2.3					
SD21	Hamlin	123.00+0.906	Rt.	Turn Right	W1-1R	30	30	6.3	15	1	1	S	New Sign Installation
				Advisory Speed Plaque 25 MPH	W13-1P	18	18	2.3					
SD21	Hamlin	124.00+0.203	Lt.	Turn Left	W1-1L	30	30	6.3	15	1	1	E	New Sign Installation
				Advisory Speed Plaque 25 MPH	W13-1P	18	18	2.3					
SD21	Hamlin	124.00+0.436	Rt.	Turn Left	W1-1L	30	30	6.3	15	1	1	W	New Sign Installation
				Advisory Speed Plaque 25 MPH	W13-1P	18	18	2.3					

P 0010(126), PCN 05FW Permanent Sign Installation Table

Highway	County	MRM	Side of Road	Description	Sign Code	Width (Inches)	Height (Inches)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SqFt)	2.0"x2.0" Perforated Tube Post 12 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Remarks
SD21	Hamlin	124.00+0.686	Lt.	Turn Right	W1-1R	30	30	6.3	15	1	1	N	New Sign Installation
				Advisory Speed Plaque 25 MPH	W13-1P	18	18	2.3					
SD22	Hamlin	356.32+0.320	Rt.	Curve Left	W1-2L	30	30	6.3	15	1	1	W	New Sign Installation
				Advisory Speed Plaque 60 MPH	W13-1P	18	18	2.3					
SD22	Hamlin	357.00+0.029	Lt.	Curve Right	W1-2R	30	30	6.3	15	1	1	N	New Sign Installation
				Advisory Speed Plaque 60 MPH	W13-1P	18	18	2.3					
SD22	Hamlin	357.00+0.685	Rt.	Curve Right	W1-2R	30	30	6.3	15	1	1	S	New Sign Installation
				Advisory Speed Plaque 60 MPH	W13-1P	18	18	2.3					
SD22	Hamlin	358.00+0.194	Lt.	Curve Left	W1-2L	30	30	6.3	15	1	1	E	New Sign Installation
				Advisory Speed Plaque 60 MPH	W13-1P	18	18	2.3					
SD22	Deuel	381.00+0.247	Rt.	Curve Right	W1-2R	30	30	6.3	15	1	1	W	New Sign Installation
				Advisory Speed Plaque 60 MPH	W13-1P	18	18	2.3					
SD22	Deuel	381.38+0.231	Lt.	Curve Left	W1-2L	30	30	6.3	15	1	1	S	New Sign Installation
				Advisory Speed Plaque 60 MPH	W13-1P	18	18	2.3					
SD27	Marshal	217.48+0.070	Rt.	Curve Left	W1-2L	30	30	6.3	15	1	1	W	New Sign Installation
				Advisory Speed Plaque 55 MPH	W13-1P	18	18	2.3					

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010 (126)	7	18
Revised 6/1/2016			

P 0010(126), PCN 05FW Permanent Sign Installation Table

Highway	County	MRM	Side of Road	Description	Sign Code	Width (Inches)	Height (Inches)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SqFt)	2.0"x2.0" Perforated Tube Post 12 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Remarks
SD27	Marshal	217.72+0.149	Lt.	Curve Right	W1-2R	30	30	6.3	15	1	1	N	New Sign Installation
				Advisory Speed Plaque 55 MPH	W13-1P	18	18	2.3					
SD45	McPherson	235.00+0.907	Rt.	Curve Left	W1-2L	30	30	6.3	15	1	1	S	New Sign Installation
				Advisory Speed Plaque 40 MPH	W13-1P	18	18	2.3					
SD45	McPherson	236.00+0.150	Lt.	Curve Right	W1-2R	30	30	6.3	15	1	1	W	New Sign Installation
				Advisory Speed Plaque 40 MPH	W13-1P	18	18	2.3					
SD47	Edmunds	234.00+0.677	Rt.	Curve Right	W1-2R	30	30	6.3	15	1	1	S	New Sign Installation
				Advisory Speed Plaque 45 MPH	W13-1P	18	18	2.3					
SD47	Edmunds	235.00+0.084	Lt.	Curve Left	W1-2L	30	30	6.3	15	1	1	E	New Sign Installation
				Advisory Speed Plaque 45 MPH	W13-1P	18	18	2.3					
SD47	McPherson	235.14+0.074	Rt.	Curve Left	W1-2L	30	30	6.3	15	1	1	W	New Sign Installation
				Advisory Speed Plaque 45 MPH	W13-1P	18	18	2.3					
SD47	McPherson	235.14+0.143	Lt.	Curve Right	W1-2R	30	30	6.3	15	1	1	N	New Sign Installation
				Advisory Speed Plaque 45 MPH	W13-1P	18	18	2.3					
SD106	Roberts	333.13+0.100	Rt.	Curve Left	W1-2L	30	30	6.3	15	1	1	N	New Sign Installation
				Advisory Speed Plaque 45 MPH	W13-1P	18	18	2.3					

P 0010(126), PCN 05FW Permanent Sign Installation Table

Highway	County	MRM	Side of Road	Description	Sign Code	Width (Inches)	Height (Inches)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SqFt)	2.0"x2.0" Perforated Tube Post 12 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Remarks
SD106	Roberts	333.13+0.297	Lt.	Curve Right	W1-2R	30	30	6.3	15	1	1	E	New Sign Installation
				Advisory Speed Plaque 45 MPH	W13-1P	18	18	2.3					
SD127	Roberts	245.00+0.918	Rt.	Curve Left	W1-2L	30	30	6.3	15	1	1	W	New Sign Installation
				Advisory Speed Plaque 55 MPH	W13-1P	18	18	2.3					
SD127	Roberts	246.08+0.369	Lt.	Curve Right	W1-2R	30	30	6.3	15	1	1	N	New Sign Installation
				Advisory Speed Plaque 55 MPH	W13-1P	18	18	2.3					
SD158	Grant	448.00+0.202	Rt.	Curve Left	W1-2L	30	30	6.3	15	1	1	W	New Sign Installation
				Advisory Speed Plaque 45 MPH	W13-1P	18	18	2.3					
SD239	McPherson	191.00+0.355	Rt.	Reverse Curve Left	W1-4L	30	30	6.3	15	1	1	S	New Sign Installation
				Advisory Speed Plaque 50 MPH	W13-1P	18	18	2.3					
SD239	McPherson	192.00+0.066	Lt.	Reverse Curve Left	W1-4L	30	30	6.3	15	1	1	N	New Sign Installation
				Advisory Speed Plaque 50 MPH	W13-1P	18	18	2.3					
SD247	McPherson	185.00+0.450	Rt.	Curve Left	W1-2L	30	30	6.3	15	1	1	S	New Sign Installation
				Advisory Speed Plaque 50 MPH	W13-1P	18	18	2.3					
SD247	McPherson	185.00+0.800	Lt.	Curve Right	W1-2R	30	30	6.3	15	1	1	W	New Sign Installation
				Advisory Speed Plaque 50 MPH	W13-1P	18	18	2.3					

P 0010(126), PCN 05FW Permanent Sign Installation Table

Highway	County	MRM	Side of Road	Description	Sign Code	Width (Inches)	Height (Inches)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SqFt)	2.0"x2.0" Perforated Tube Post 12 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Remarks
SD247	McPherson	186.00+0.387	Rt.	Curve Right	W1-2R	30	30	6.3	15	1	1	E	New Sign Installation
				Advisory Speed Plaque 50 MPH	W13-1P	18	18	2.3					
SD247	McPherson	186.00+0.735	Lt.	Curve Left	W1-2L	30	30	6.3	15	1	1	N	New Sign Installation
				Advisory Speed Plaque 50 MPH	W13-1P	18	18	2.3					
							TOTAL	365.2	645.0	43.0	43.0		

Sign Summary

Sign Code	Description	Width (Inches)	Height (Inches)	Sq. Ft.	Quantity	Flat Aluminum Sign, Nonremovable Copy Super or Very High Intensity (SQFT)	Text / Background
W1-1	Turn	30	30	6.3	4	25.2	Black on Yellow
W1-2	Curve	30	30	6.3	35	220.5	Black on Yellow
W1-4	Reverse Curve	30	30	6.3	4	25.2	Black on Yellow
W1-8	Chevron	18	24	3	594	1782.0	Black on Yellow
W13-1P	Advisory Speed Plaque	18	18	2.3	37	85.1	Black on Yellow
					Totals	2138.0	

P 0010(126), PCN 05FW

Chevron Installation Table

Sign Code W1-8

Highway	County	MRM	Curve Length (Ft)	Chevron Spacing (Ft)	Number of Chevrons	Number of Poles	2.0"x2.0" Perforated Tube Post 12 Ga. (Ft)	Total Perforated Tube Post (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	Remove Traffic Sign (Each)	Remarks
SD10	Brown	299.00+0.264	2099.4	150	28	15	7.5	112.5	15		New Installation, State Furnshed signs and Brackets
SD10	Brown	301.00+0.166	2398.6	150	32	17	7.5	127.5	17		New Installation, State Furnshed signs and Brackets
SD13	Brookings	120.00+0.913	2419.7	151	32	17	7.5	127.5	17		New Installation, State Furnshed signs and Brackets
SD13	Brookings	125+00+0.759	334.5	111	6	4	7.5	30.0	4		New Installation, State Furnshed signs and Brackets
SD13	Brookings	125.85+0.130	1286.3	143	18	10	7.5	75.0	10		New Installation, State Furnshed signs and Brackets
US14 WB	Brookings	402.94+0.010	2970.1	156	38	20	7.5	150.0	20		New Installation, State Furnshed signs and Brackets
US14 EB	Brookings	402.00+0.898	2970.1	156	38	20	7.5	150.0	20		New Installation, State Furnshed signs and Brackets
SD15	Roberts	187.00+0.365	2406.7	150	32	17	7.5	127.5	17	20	Replace Existing, State Furnished Signs
SD20	Codington	423.00+0.622	896.7	149	12	7	7.5	52.5	7		New Installation, State Furnshed signs and Brackets
SD20	Codington	423.75+0.140	1142.9	143	16	9	7.5	67.5	9		New Installation, State Furnshed signs and Brackets
SD21	Hamlin	124.00+0.047	321.2	80	8	5	7.5	37.5	5	9	Replace Existing, State Furnished Signs
SD21	Hamlin	124.00+0.531	318.0	80	8	5	7.5	37.5	4	7	Replace Existing, State Furnished Signs
SD22	Hamlin	356.32+0.349	1015.7	145	14	8	7.5	60.0	8		New Installation, State Furnshed signs and Brackets
SD22	Hamlin	357.00+0.714	2384.3	159	30	16	7.5	120.0	16		New Installation, State Furnshed signs and Brackets
SD22	Deuel	381.00+0.276	2265.8	151	30	16	7.5	120.0	16		New Installation, State Furnshed signs and Brackets
SD27	MarshaL	217.48+0.123	751.9	107	14	8	7.5	60.0	8	14	Replace Existing, State Furnished Signs
SD45	McPherson	235.00+0.973	1121.0	112	20	11	7.5	82.5	11		New Installation, State Furnshed signs and Brackets
SD47	Edmunds	234.00+0.743	1797.0	120	30	16	7.5	120.0	16		New Installation, State Furnshed signs and Brackets
SD47	McPherson	235.14+0.743	1807.7	120	30	16	7.5	120.0	16		New Installation, State Furnshed signs and Brackets
SD106	Roberts	333.13+0.166	1870.3	117	32	17	7.5	127.5	17		New Installation, State Furnshed signs and Brackets
SD127	Roberts	245.00+0.971	2410.0	151	32	17	7.5	127.5	17		New Installation, State Furnshed signs
SD158	Grant	448.31+0.012	714.3	119	12	7	7.5	52.5	7	5	Replace Existing, State Furnished Signs
SD239	McPherson	191.00+0.408	1587.3	159	20	11	7.5	82.5	11		New Installation, State Furnshed signs and Brackets
SD239	McPherson	191.00+0.790	1363.9	152	18	10	7.5	75.0	10		New Installation, State Furnshed signs and Brackets
SD247	McPherson	185.00+0.502	1294.1	118	22	12	7.5	90.0	12		New Installation, State Furnshed signs and Brackets
SD247	McPherson	186.00+0.439	1286.7	117	22	12	7.5	90.0	12		New Installation, State Furnshed signs and Brackets
					594	323		2423	322	55	

SCOPE OF WORK

Work on the project consists of but is not limited to installing chevrons, replacing existing chevrons, curve signs and advisory speed plaque on horizontal curves in the Aberdeen Region.

GENERAL NOTES

Permanent sign locations shall be staked in the field by the Region Traffic Engineer. The Contractor shall give the Engineer a minimum of two weeks advance notice to allow for staking prior to sign installation.

The Contractor shall be responsible for contacting South Dakota One Call to locate the utilities at the staked sign installation locations.

Prior to ordering sign posts, the Contractor shall verify post lengths. The height of the post shall not exceed the minimum height needed by more than 0.5 feet. Any portion that extends above the sign shall be cut off. No separate payment will be made for cutting the post or for that length cut off.

REMOVE EXISTING SIGNS

Existing signs within the project limits are summarized in the Sign Table. This table provides the approximate MRM location for each sign. Existing signs in the table are indicated to be removed and not reused.

All existing signs and hardware listed to be removed shall become the property of the Contractor.

Holes remaining from the removal of 4"x6" wood posts shall be backfilled and compacted with material placed in layers not to exceed 6 inches in depth.

All costs associated with the removal of existing signs, posts, hardware, and backfilling holes shall be incidental to the contract unit price per each for REMOVE TRAFFIC SIGN.

All existing sign posts and/or sign bases shall be removed in their entirety.

SQUARE TUBE ANCHOR SLEEVE

The Contractor shall furnish and install new square tube anchor sleeve as follows:

A 2.25" x 2.25" x 4' perforated tube post (12 Gauge) shall be used as the anchor post for installation with the square tube anchor sleeve.

NEW PERMANENT SIGNING

New signs for installation are summarized in the Sign Table.

Sign Design

Signs shall be constructed as required per the Manual on Uniform Traffic Control Devices (MUTCD), the latest edition of "Standard Highway Signs", and as specified on the Special Sign Design sheets.

All upper/lower case letters and numerals shall be as required per the MUTCD, the latest edition of "Standard Highway Signs", and as illustrated on the Special Sign Design sheets.

Sign Sheeting

All signs shall be manufactured in accordance with the sheeting manufacturer's recommendations utilizing a matched component system, including inks, electronic cuttable films, and protective overlay films. Digitally printed signs will not be accepted.

Sign Installation Hardware

The Contractor shall use 3/8 inch diameter rust proof machine sign bolts, flat metal washers, neoprene washers (against the sign sheeting), lock washers, and nuts to fasten the sign to the channel aluminum and posts. A minimum of two bolts shall extend through each post.

All costs associated with furnishing and installing the new permanent signs, and with furnishing and installing stiffeners and hardware shall be incidental to the contract unit price per square foot for Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity.

GENERAL MAINTENANCE OF TRAFFIC

Work will be allowed only during daylight hours.

Traffic control during the work shall be a minimum of a mobile work operation. The Contractor may use lane closures to complete the work should conditions dictate.

Cost of equipment and traffic control devices on equipment, including arrow panels and signs, shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost for this work shall be incidental to the contract unit prices for the various items unless otherwise specified in the plans.

Sufficient quantities for Traffic Control Signs have been included to sign for one work area. If the Contractor elects to use additional traffic control, the cost for additional traffic control devices or equipment shall be incidental to the contract unit price per square foot for Traffic Control Signs.

Revised 6/20/16 DLM

INSTALL STATE FURNISHED CHEVRONS AND BRACKETS

The 18" x 24" chevrons mounting brackets will be furnished by the SDDOT and installed by the Contractor. The total cost of the furnished items for tax purposes is \$24,445.60

The chevrons and brackets located in the SDDOT Aberdeen Region Yard. The Contractor shall be responsible for transporting the chevrons and brackets to the sites indicated on the plan sheets. The Contractor shall contact the Region Traffic Engineer for pick up information. The Region Traffic Engineer Dan Martell, (605) 626-78798.

All work involved in installing and transporting the chevrons and, shall be incidental to the contract unit price per SqFt for "Install State Furnished Sign".

ITEMIZED LIST FOR TRAFFIC CONTROL

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	1	30"	5.2	5.2
W4-2	LEFT or RIGHT LANE ENDS (symbol)	1	48" x 48"	16	16
W20-1	ROAD WORK AHEAD	3	48" x 48"	16	48
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16	32
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	1	48" x 48"	16	16
W20-7	FLAGGER (symbol)	2	48" x 48"	16	32
G20-2	END ROAD WORK	2	36" x 18"	5	10
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			159

MOBILE OPERATIONS ON TWO-LANE ROAD
(TYPICAL PAINT APPLICATION)

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(126)	13	18
Plotting Date: 06/02/2016			

Revised 6/1/2016 DLM

Notes for Mobile Operations on Multi -lane Road (Typical)

Vehicle-mounted signs shall be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs shall be covered or turned from view when work is not in progress.

Shadow and work vehicles shall display high-intensity rotating, flashing, oscillating, or strobe lights.

If an arrow board is used, it shall be used in the caution mode.

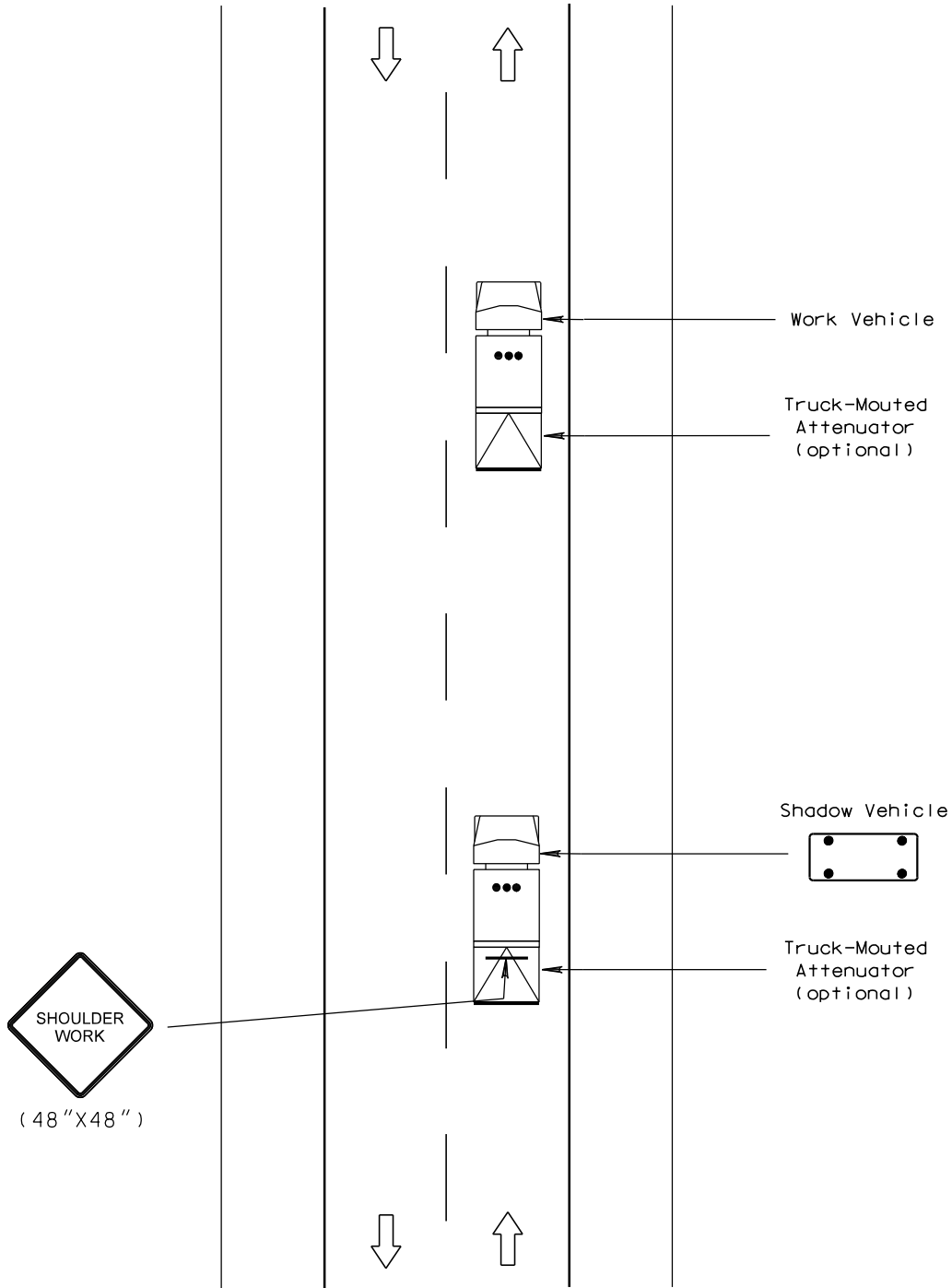
Whenever adequate stopping sight distance exists to the rear, the shadow vehicle should maintain the minimum distance from the work vehicle and proceed at the same speed. The shadow vehicle should slow down in advance of vertical or horizontal curves that restrict sight distance.

The shadow vehicles should also be equipped with two high-intensity flashing lights mounted on the rear, adjacent to the sign.

Additional shadow vehicles to warn and reduce the speed of oncoming or opposing vehicular traffic may be used. Law enforcement vehicles may be used for this purpose.

A truck-mounted attenuator may be used on the work vehicle and the shadow vehicle.

Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.



MOBILE OPERATIONS ON TWO-LANE ROAD

Plotting Date: 06/02/2016

The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

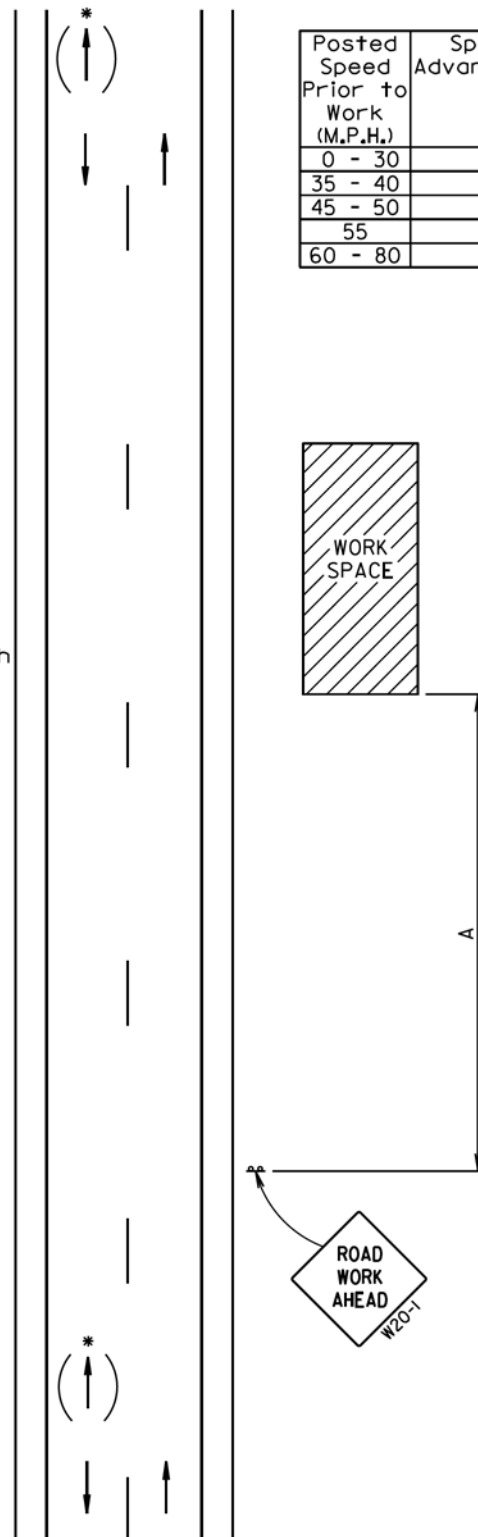
The signs illustrated shall be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

- * If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 80	1000



April 15, 2015

Published Date: 2nd Qtr. 2016

***S
D
D
O
T***

GUIDES FOR TRAFFIC CONTROL DEVICES WORK BEYOND THE SHOULDER

PLATE NUMBER
634.01

Sheet 1 Of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (C)
0 - 30	200	25
35 - 40	350	25
45 - 50	500	50
55	750	50
60 - 65	1000	50

- Flagger
 Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

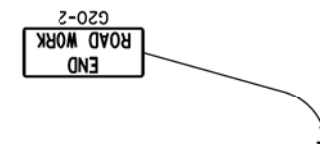
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) shall be displayed in advance of the liquid asphalt areas.

Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

The channelizing devices shall be drums or 42" cones.

Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.

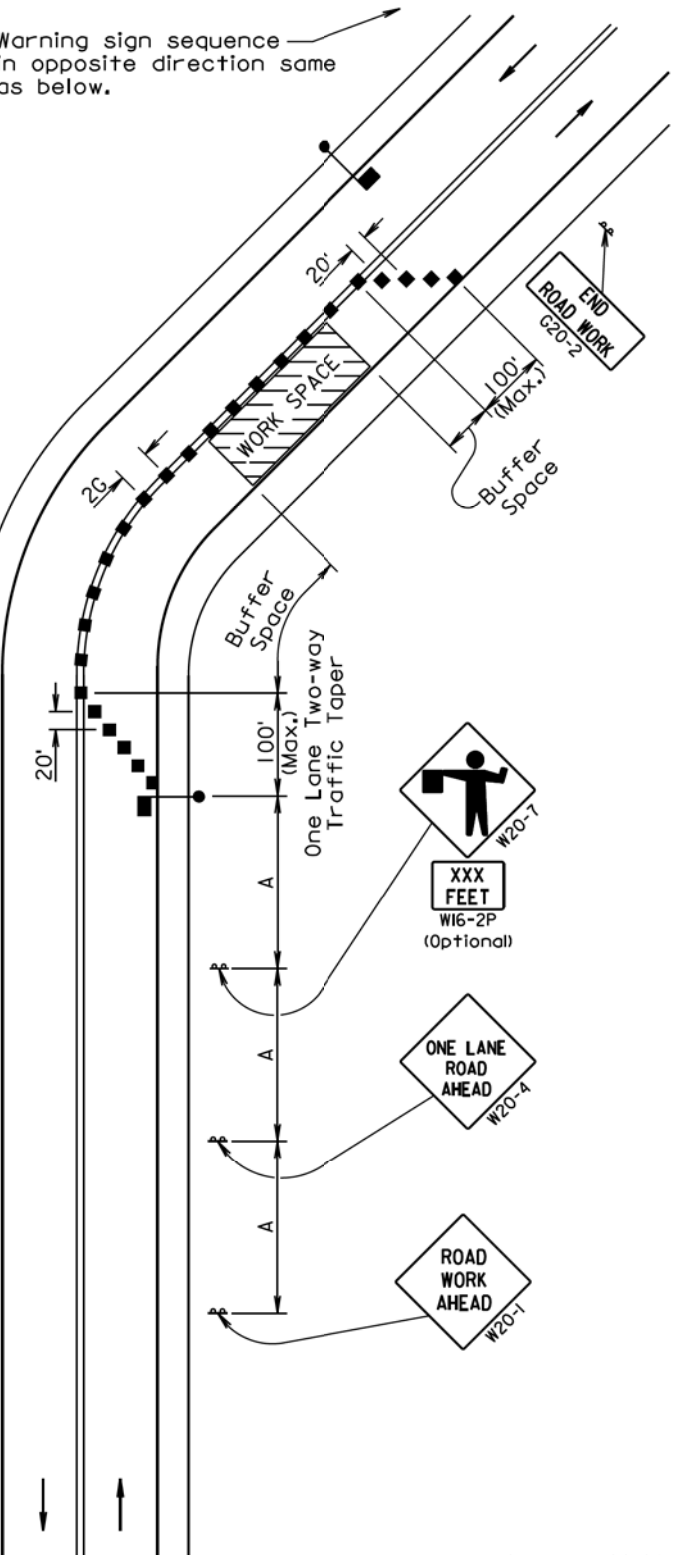


Channelizing devices and flaggers shall be used at intersecting roads to control intersecting road traffic as required.

The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

The length of A may be adjusted to fit field conditions.

Warning sign sequence —
in opposite direction same
as below.



September 22, 2014

Published Date: 2nd Qtr. 2016

**S
D
D
O
T**

**GUIDES FOR TRAFFIC CONTROL DEVICES
LANE CLOSURE WITH FLAGGER PROVIDED**

PLATE NUMBER
634.23

Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45 - 50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *

* Spacing is 40' for 42" cones.

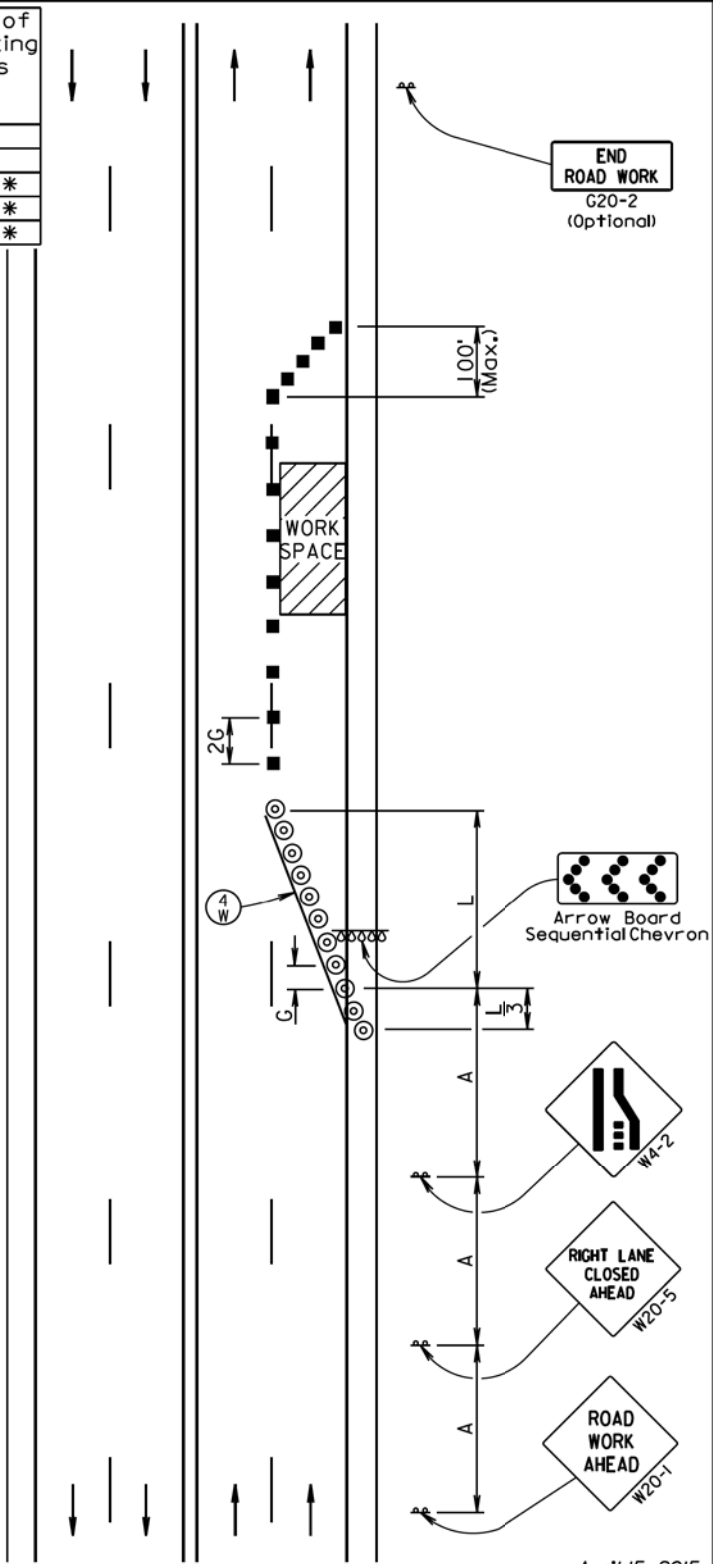
- ⊙ Reflectorized Drum
- Channelizing Device
- ④ W 4" White Temporary Pavement Marking

The channelizing devices shall be 42" cones or drums.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

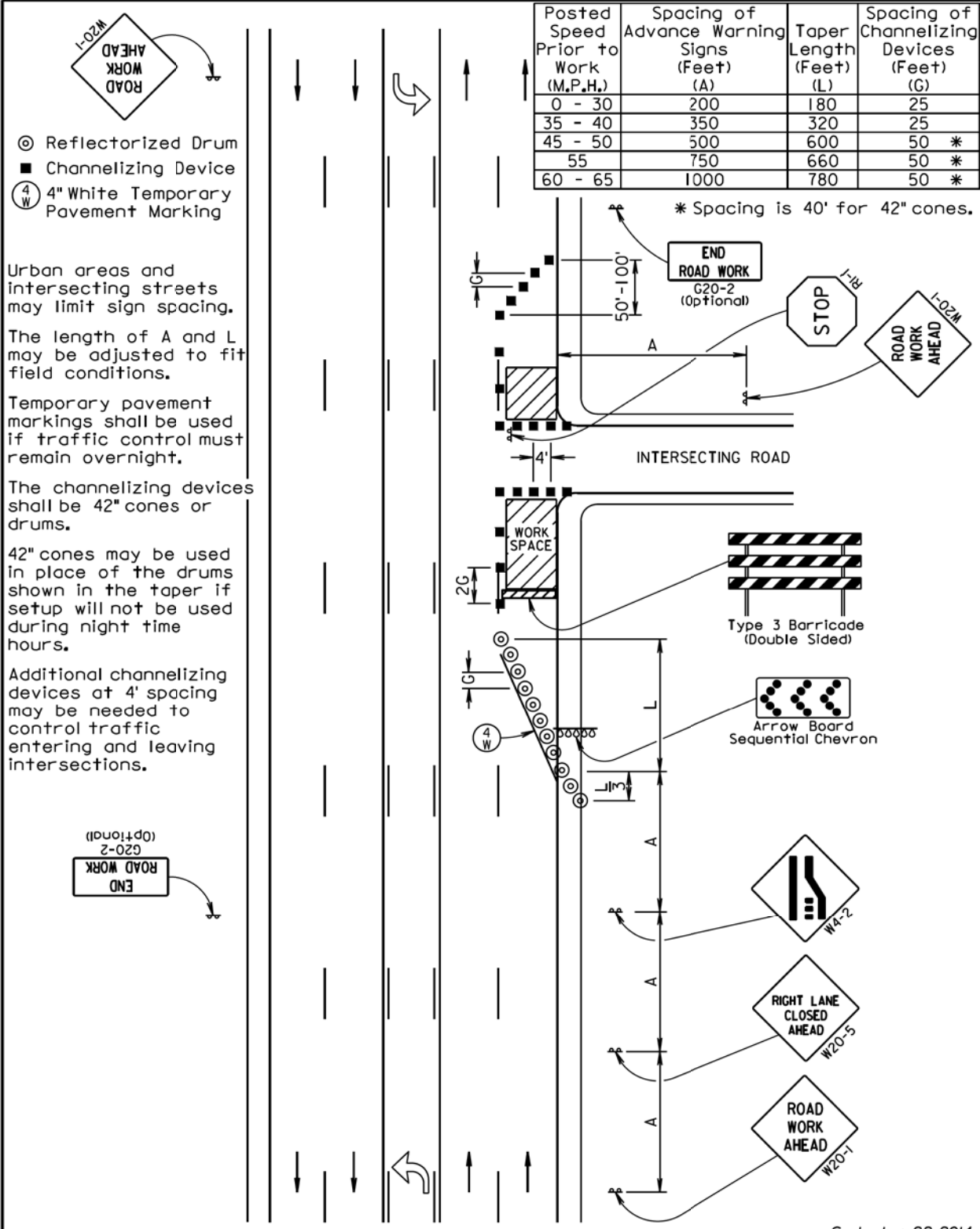
Temporary pavement markings shall be used if traffic control must remain overnight.

The length of A and L may be adjusted to fit field conditions.



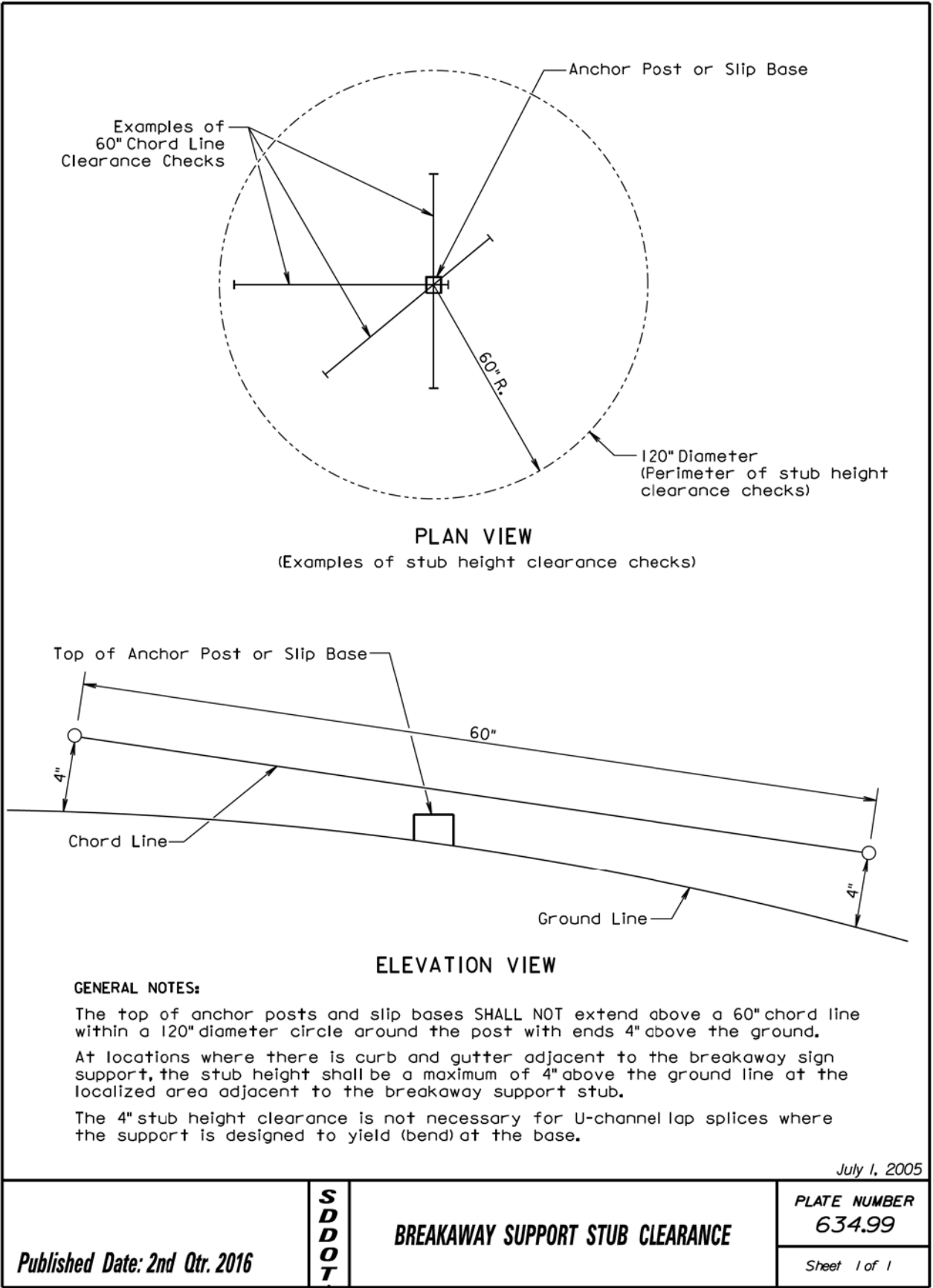
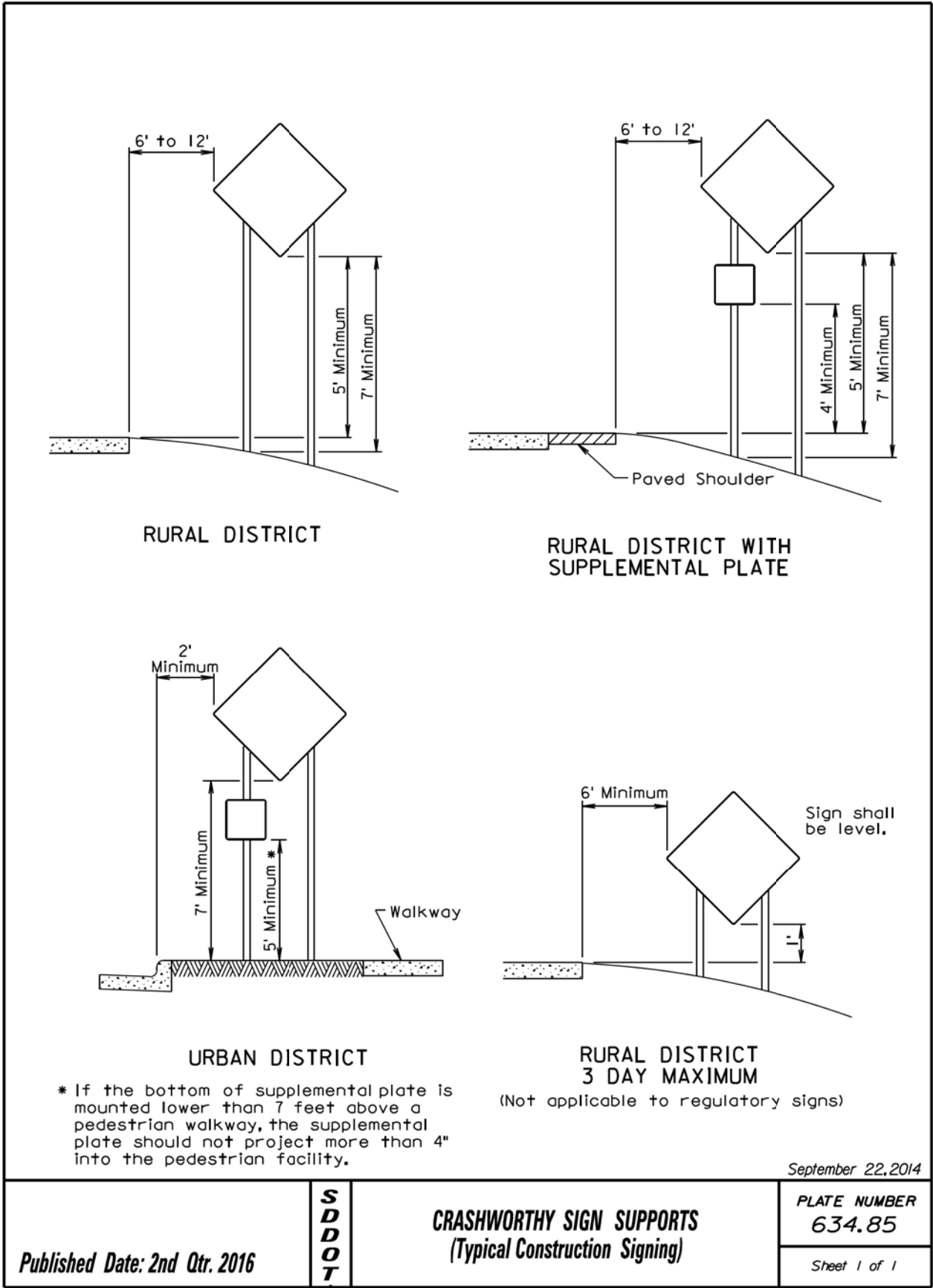
April 15, 2015

Published Date: 2nd Qtr. 2016	S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES	PLATE NUMBER
		4-LANE UNDIVIDED, RIGHT LANE CLOSED	634.47
			Sheet 1 of 1



September 22, 2014

Published Date: 2nd Qtr. 2016	S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES	PLATE NUMBER
		5-LANE, OUTSIDE LANE CLOSED	634.60
			Sheet 1 of 1

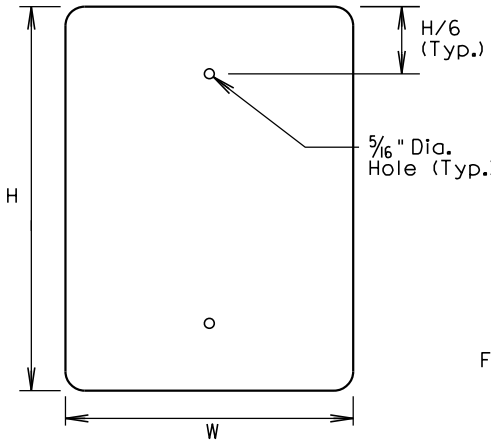


STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(126)	17	18
Plotting Date: 06/02/2016			

CHEVRON INSTALLATION DETAIL

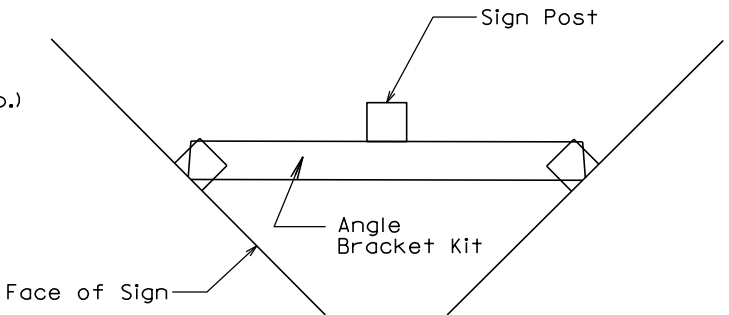
WI-8 Single Mount Detail

View from Face

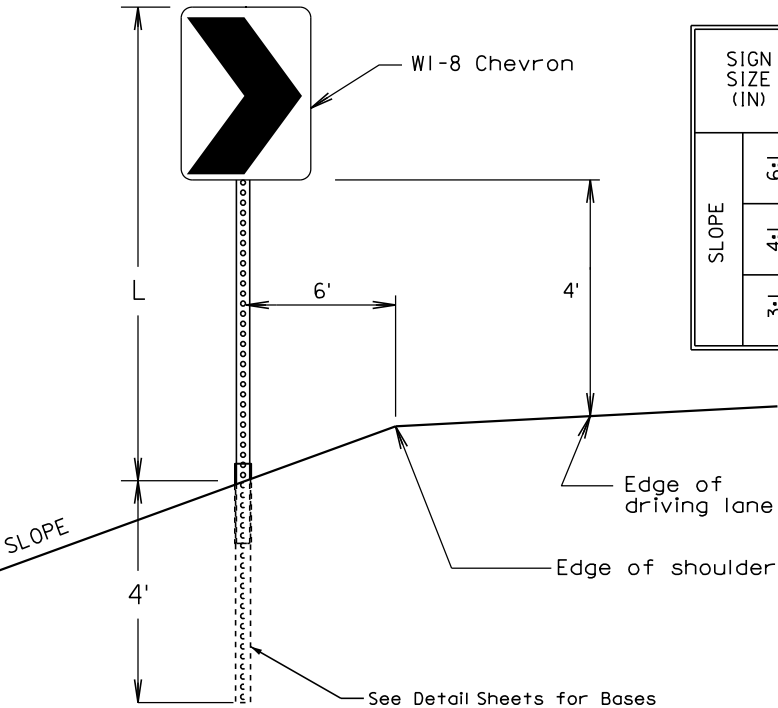


WI-8 Double Mount Detail

View from Top



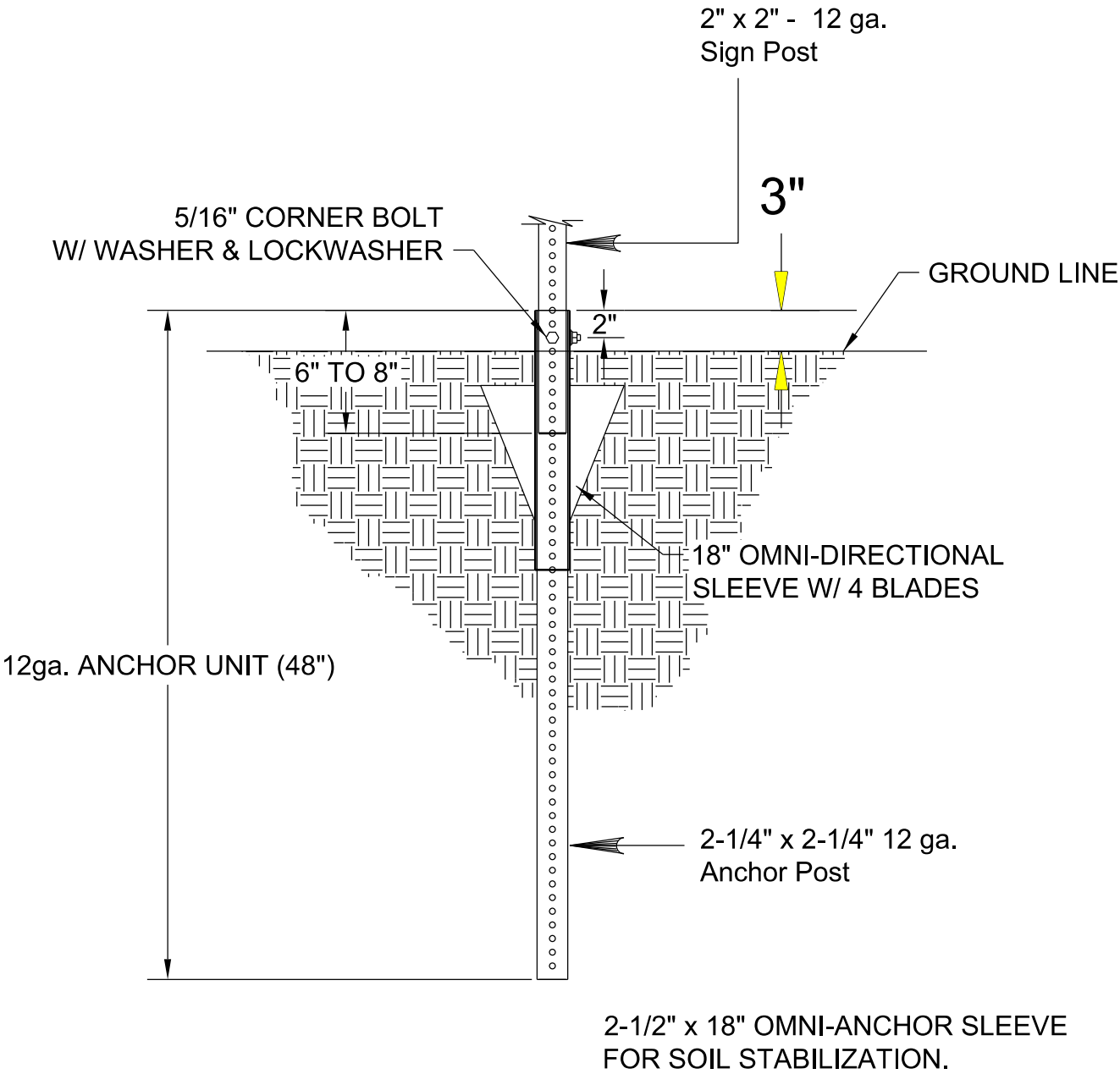
NOTE: The first Chevron shall be placed within 50' of begining of curve from each direction of travel and shall be mounted as a single mount installation. All intermediate installations shall be mounted as a double mount installation with approach angle adjusted such that 3 sign faces are visible at all times when traveling through the curve.



SIGN SIZE (IN)		12x18	18x24	24x30	30x36	36x48
		POST LENGTH L (FT)				
SLOPE	6:1	6 1/2	7	7 1/2	8	9
	4:1	7	7 1/2	8	8 1/2	9 1/2
	3:1	7 1/2	8	8 1/2	9	10

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	OH 0010(126)	18	18
Plotting Date: 06/02/2016			

SQUARE TUBE 4 BLADE ANCHOR DETAIL



2-1/2" x 18" OMNI-ANCHOR SLEEVE
FOR SOIL STABILIZATION.

ANCHOR SLEEVE
TOP VIEW

2-1/2" x 18" 12 ga. Omni-Sleeve

